



# BTEC Applied Science

**Examination Board:**

Edexcel

**Assessment:**

A combination of external exams and internal assignments

## Why Study Applied Science?

Students will develop understanding of fundamental scientific principles and applied knowledge relating to biology, chemistry and physics. They will develop their laboratory techniques, including health and safety assessment, and associated professional practice. Scientific Research skills including researching and planning methodologies, primary data collection and analysis, drawing justified conclusions, secondary research skills including collecting information from a range of sources, its evaluation and interpretation, and its use to draw reasoned conclusion. Students can also develop other transferable skills such as personal responsibility and independent learning. Students develop the ability to practically apply scientific concepts, which is beneficial to the analytical approach of related degrees. Critical thinking and independent learning help students to be better prepared for the self-directed learning approach used in higher education and become more open-minded to learning. Research and extended writing skills with the other skills, create a good foundation for academic success.

## Your Future Pathways

Life Sciences Biology / Biological Sciences / Human Biology Biochemistry / Biotechnology Ecology and Environmental Biology Microbiology / Molecular Biology Wildlife Ecology and Conservation Science / Conservation Biology Chemistry / Biochemistry / Environmental Science / Medicinal Chemistry/ Pharmacology / Pharmaceutical Science / Food Science / Forensic Science / Chemistry / Biology/ Nutrition and Dietetics Hydrology / Water Science/ Environmental Science / Health/ Nursing / Sport and exercise studies.

# What Will I Study?

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The qualification has four mandatory units covering the following topics:

- Principles and Applications of Biology – Structure and function of cells and tissues, biological molecules, enzymes and their role in organisms
- Principles and Applications of Chemistry – Structure of the Periodic Table and its implications on physical and chemical properties of substances, through analysis of different bonding methods
- Principles and Applications of Physics – Waves and their applications; force principles and their application in transportation and construction of electrical circuits
- Practical Scientific Procedures and Techniques – Practical applications across the sciences, including chromatography, colorimetry and electrical circuits. Students have a choice from two optional units covering the following topics:
  - Scientific Investigation Skills – Investigative research, including planning, data collection, analysis and evaluation
  - Contemporary Issues in Science – Contemporary scientific issues including the reliability of sources of scientific information and their associated validity.